

REMARKS

The Applicants are in receipt of the Office Action of November 24, 2009, and after careful study of this Office Action have the following comments.

Interview

Applicants thank Examiner Bartosik and SPE Chilcot for their courtesy in granting the undersigned a personal interview in this case. The interview, which took place on March 22, 2010, involved a discussion of the pending 35 USC §103 rejections of the claims. Unfortunately, Applicants' representative and the Examiner did not reach agreement concerning these rejections.

Claim Objections

Applicants acknowledge that the objections to claim 7 has been corrected and thank the Examiner for so indicating.

Amendments to the Claims

Without conceding the correctness of the Examiner's rejections, and in order to facilitate obtaining early allowance of the above-identified application, certain of the claims have been amended. Applicants expressly reserve the right to seek patent protection for the original claims and any other claims supported by the above-identified application in one or more related applications.

Independent claims 1, 7, 10 and 21 have been amended in

similar manners. First, the claims have been amended to indicate that bearing surfaces of each the upper or lower (or first and second) plates are linked by connecting members that are affixed along one or more edge of each bearing surface. This limitation is supported by the specification at e.g., page 8, first full paragraph, and Figures 3 and 4. Secondly, the claims have been amended to indicate that the shape of the bearing surfaces is such that during a seismic event or other vibration a substantially constant restoring force results in a damping of continued movement. See e.g., the Specification at the paragraph bridging pages 3 and 4.

Applicants submit that all the claim amendments presented herein are all supported by the present specification and do not present any new matter.

Rejection of Claims Pursuant to 35 U.S.C. §112

Claims 1-4 and 7-20 were rejected as allegedly being indefinite.

Claim 1 was rejected as being unclear in the language of the upper plate having a plurality of bearing surfaces linked by connecting members; claim 3 was said to portray only one upper plate (70) per bearing surface. Applicants traverse this rejection.

The specification makes clear that "referring particularly to Figure 3 . . . economical construction of plates 20, 30 may be achieved by affixing together a plurality of substantially flat, planar plate segments 70 with a series of connecting members 80. Plate segments 70 are suitably configured with

recesses 15" Specification at page 8, first full paragraph. Fig. 3 therefore shows 4 plate segments comprising a bearing surfaces linked by a series of connecting members 80, affixed along one or more edge of each said bearing surface. Therefore, Applicants respectfully believe claim 1 and its dependent claims are clear and this rejection is inapplicable.

Claims 1, 7, and 10 were found to be indefinite due to the language of the payload, and the Examiner construed the payload and equipment as an intended use only. Applicants respectfully traverse this rejection as well.

Claim 1 has been amended to delete reference to a payload.

Claims 7 and 10 have been amended to indicate that the isolation platform and payload comprise a combination. Thus, clearly the payload and equipment is not merely an intended use but is an element of the invention as claimed.

For these reasons the 35 USC 112 rejections are thought to have been overcome.

Rejection of Claims Pursuant to 35 U.S.C. §103

The Examiner has again rejected claims 1-7, and 9-11, under 35 U.S.C. 103 (a) over U.S. Patent No. 6,052,955 (Haider) in view of U.S. Patent No. 4,917,211 (Yamada et al.) further in view of U.S. Patent No. 5,599,106 (Kemeny) for alleged obviousness.

In addition, the Examiner has rejected claims 12-20 over

these references since the limitations are set forth as intended use. Applicants respectfully, but vigorously disagree for the following reasons.

Haider is directed to an oscillating floor for therapeutic purposes, which, in the only embodiment that describes any bearings or bearing surfaces, uses "ball in sphere" bearings. Haider states that "the standing floor can be mounted in various ways so that it can oscillate." Column 2, lines 36-37 (emphasis added. Furthermore, the specification at column 4, lines 57-64 discloses:

Since the oscillating behavior, especially the frequency, depends on the shaping of the particular spherical cups ISa, ISb, it is possible to achieve in this manner that a blocking of the one stage or of the other stage permits only quite specific given frequencies to act. The user can thus select the optimum natural frequencies corresponding to one's particular individual requirements within a certain framework.

Emphasis added.

Yamada et al. discloses a seismic isolator comprising a friction device having an upper friction plate and a lower friction plate, the friction planes having a characteristic of Coulomb friction, and horizontally placed springs which reduce a relative displacement and a residual displacement.

Kemeny discloses a seismic isolation bearing for structures consisting of a steel ball sandwiched between two horizontal steel load plates.

The present invention as set forth in independent Claim 1,

describes an isolation platform comprising an upper plate upon which equipment to be supported is placed, said upper plate having a plurality of downward-facing, conical, rigid bearing surfaces **linked by connecting members affixed along one or more edge of each said bearing surface**; a lower plate secured to a foundation, said foundation supporting the isolation platform and the payload comprising equipment to be supported, said lower plate having a plurality of upward-facing, conical, rigid bearing surfaces **linked by connecting members affixed along one or more edge of each said bearing surface** disposed opposite said downward-facing, conical, rigid bearing surfaces, said downward and upward bearing surfaces defining a plurality of bearing cavities between said upper and lower plates; a plurality of rigid spherical balls interposed between said downward and upward bearing surfaces; structured so that in response to an external vibration, said lower plates are displaced laterally with respect to said upper plates such that the rigid spherical balls therebetween roll about their respective bearing surfaces and are raised to higher elevations wherein a restoring force damping continued movement of the plates is substantially constant. The underlined limitations are elements of the remainder of the independent claims (claims 7, 10 and 22), and are therefore elements of each and every one of the pending claims.

As indicated above, Haider is directed to an oscillating floor in which optimum natural frequencies are to be selected. However, frequency "oscillation" is exactly what the present invention wishes to dampen and reduce; the net movement of the payload is desired to be reduced during an earthquake as a result of the use of invention of each of the present claims.

The primary reference, Haider therefore teaches away from the present invention, as it uses a ball in sphere configuration to encourage movement of a person standing on the floor, while the present invention reduces movement of a payload. Additionally, Haider does not suggest or teach the specifically claimed device, having collecting members affixed along one or more edge of the claims isolation platform. "Economical construction" of the claimed invention, the present specification teaches, "may be achieved by affixing together a plurality of substantially flat, planar plate segments 70 with a series of connecting members 80. . . . " Specification at page 8, first full paragraph.

In addition, as stated above, Haider uses a "ball in sphere" bearing (see Fig. 5 of Haider) in the only embodiment that describes any bearings or bearing surfaces, with a spherical bearing surface. On the contrary, the present claims that are directed to either conical bearing surfaces or a combination of radial and linear bearing surfaces. Haider does not disclose or suggest any shape other than variants of a spherical shape, contrary to the Examiner's allegations on pages 5-6 of the Office Action.

Furthermore, Haider does not disclose, teach or suggest an isolation platform comprising two plates, namely an upper plate having a plurality of downward facing conical rigid bearing surfaces linked by connecting members and a lower plate secured to a foundation, said lower plate having a plurality of upward facing, conical, rigid bearing surfaces linked by connecting members and disposed opposite said downward facing conical rigid bearing surfaces. Haider does not disclose, teach or suggest a

second lower plate as recited in claim 1, a second structure as recited in claim 7, a second open pan structure as recited in claim 10, a second plate segment as recited in claim 21, on each of which a corresponding upper plate, first structure, first open pan structure or first plate segment is disposed. On the contrary, Haider is only concerned with only one standing floor (element (13)), namely, an oscillatory floor surface, that is supported at least three points, each having a spherical depression in confrontation to define a space for a ball (bearing).

Based on the above, Applicants submit that Haider teaches away from, and does not render obvious the present independent claims 1, 7, 10 and 21, and even more so the claims dependent therefrom.

The Examiner concedes that Haider does not specifically disclose a connecting member for both the upper and lower plates. The Examiner alleges, however, that Yamada et al. teaches the use of connecting members in connection with a platform system.

Yamada et al. discloses a friction-based seismic isolator. This isolator, which is completely different from and much more complicated than the apparatus claimed in the present application, has a ball joint (element (18)), rather than a freely rolling, rigid ball bearing as recited in the present claims. Yamada et al. does disclose in addition, ball bearings in rolling contact with a slide plate. However this slide plate is notably flat and horizontal, as opposed to the bearing surfaces of the presently claimed invention that are either

conical or a combination of radial and linear surfaces.

Furthermore, Yamada et al. does not have a lower plate, and instead has separate frame members that attach to a foundation (page 6, paragraph 2 of office action). Notably, the foundation or floor does not have a bearing surface. Thus this system is completely different from the present claimed invention.

Finally like Haider, Yamada does not even begin to suggest a plurality of upward-facing, conical, rigid bearing surfaces linked by connecting members affixed along one or more edge of each said bearing surface, as is present in each device of the pending claims.

In combination Yamada et al. does not cure the deficiencies of Haider. For example, as noted above, Yamada et al. is as deficient as Haider is with respect to the presence of a lower plate/second structure/second pen pan structure as recited in present independent claims 1, 7, 10 and 21. Furthermore, the bearing surfaces disclosed in Haider and Yamada et al. are so different one from other that their teachings cannot be combined. Applicants therefore submit that a person of ordinary skill in the art would not derive the present invention from a combination of Haider and Yamada et al.

The Examiner alleges that Kemeny cures the deficiency in the teachings of Haider and Yamada et al. by disclosing the rigid bearing surface of the present invention. Applicants disagree for the following reasons.

As noted above, neither Haider nor Yamada et al., either

alone or in combination, render obvious to a person of ordinary skill in the art the present invention as recited in independent claims 1, 7, 10 and 21 (all the independent claims) of the present invention.

In addition, as discussed above, the combination of Haider and Yamada et al. does not describe an invention where a curved bearing surface would be useful. Notably, the ball joint and seal in Yamada et al. are not bearing surfaces. Thus, the combination of Haider and Yamada et al. does not call for the rigid bearing surface disclosed in Kemeny.

With Haider teaching away from the present invention, Yamada and Haider failing to teach important elements of the claimed invention (such as opposing plates, the bearing surfaces, the way in which the connecting members are joined and affixed to the plate segments etc.) the addition of Kemeny does not render the current claims obvious. Kemeny does disclose a bearing having a load-bearing surface like the ones used in certain embodiments of the present invention. However, the combination of Haider, Yamada and Kemeny simply do not render obvious the present invention.

Therefore, neither Haider, Yamada et al. nor Kemeny, either by themselves or in combination, disclose, teach or suggest the present invention as recited in independent claims 1, 7, 10 and 21 of the present invention.

In sum, neither the combination of Haider and Yamada et al. or with the addition of Kemeny, disclose, teach or suggest the invention recited in present claims 1,7,10 and 21.

In view of the above, Applicants submit that the invention of independent claims 1, 7, 10 and 21 is not obvious, and meets the requirements of 35 U.S.C. 103(a). Applicants submit that the claims dependent therefrom, that further limit independent claims 1,7,10 and 21, are therefore also patentable. Applicants respectfully ask that the Examiner reconsider and withdrawn the present claim rejections.

Claims 8 and 25 was rejected under 35 U.S.C. 103(a) as being allegedly obvious over the combination of Haider, Yamada et al., Kemeny "as applied to claims 7 and 21" and U.S. Patent No. 5,716,037 (hereinafter Haak). Applicants respectfully traverse this rejection for the following reasons.

Haak discloses a seismic isolator with bidirectional roller bearings and restoring means including elongated, non-flexible compression spring assemblies.

First, Applicants respectfully point out, as discussed above, that Haider, Yamada and Kemeny "as applied to claim 7 and 21", do not have the significance claimed in the Office Action.

Additionally Haak not only does not disclose teach or suggest the invention, but also does not does not cure the deficiencies in these three references to derive the present invention recited in the independent claims 1,7,10 and 21. Even more so, the fact is that the combination of Haider, Yamada et al, Kemeny and Haak would not, at the filing date of the present application, have rendered the invention encompassed by dependent claims 8 and 25 obvious to a person of ordinary skill in the art in any way.

In view of the above, the Applicants submit that all the pending claims meet the requirements of 35 U.S.C. 103(a) and respectfully request that the Examiner withdraw the outstanding rejection.

CONCLUSION

For the reasons provided above the Applicants submit that the claims are now in condition for allowance, and respectfully request that the Examiner issue a Notice to that effect. If any minor issues remain and it is thought that a telephone conference with the undersigned would expedite the resolution of these matters, the Examiner is invited to call the undersigned at any time.

Applicants are filing this Submission in connection with the filing of a Request for Continued Prosecution and hereby request a three month extension of time to reply to the outstanding Office Action. Applicants are filing this Submission electronically and will pay the extension fee by credit card. If any further fee is due in connection with this response kindly use Deposit Account 21-0890 for the payment of such fee now due, or to credit any overpayment.

Respectfully submitted,

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